

What is claimed is:

1. An article of manufacture for heat absorption, comprising:
  - (a) hydroxide in an amount sufficient to effect a level of heat absorption;
  - (b) support means for supporting said hydroxide, said hydroxide being supportable in relation to said heat sensitive device by said support means;

5 wherein said hydroxide effects said level of heat absorption at least in part based on an irreversible decomposition of said hydroxide.
2. An article of manufacture according to claim 1, wherein the means for supporting said hydroxide comprises a retaining matrix, packaging, encapsulation, 10 microencapsulation, enclosure or structure.
3. An article of manufacture according to claim 1, wherein a heat sensitive device is embedded within said hydroxide.
4. An article of manufacture according to claim 1, wherein the hydroxide is surrounded by a heat sensitive device.
- 15 5. An article of manufacture according to claim 1, wherein the means for supporting said hydroxide is a closed container in which said hydroxide is located.
6. An article of manufacture according to claim 5, wherein said hydroxide lines an inner wall of the closed container.
7. The article of manufacture according to claim 4, wherein said heat sensitive 20 device is located within and spaced from said hydroxide.
8. An article of manufacture according to claim 1, wherein said hydroxide is adhered to a flexible substrate, said flexible substrate being adaptable to the size and shape of a heat sensitive device in thermal communication with said hydroxide.
- 25 9. An article of manufacture according to claim 1, wherein said hydroxide is selected from the group consisting of Lithium Hydroxide, Sodium Hydroxide, Potassium Hydroxide, Magnesium Hydroxide, Calcium Hydroxide, Beryllium Hydroxide, Aluminum Hydroxide, Ammonium Hydroxide and mixtures thereof.

10. An article of manufacture according to claim 1, further comprising at least one layer of insulation placed between said heat sensitive device and said support means.
11. An article of manufacture according to claim 1, further comprising at least one 5 layer of insulation placed between said support means and a source of heat.
12. An article of manufacture according to claim 1, further comprising a hermetic seal surrounding said support means.
13. An article of manufacture according to claim 12, wherein said hermetic seal includes a vent.
- 10 14. An article of manufacture according to claim 1, wherein said hydroxide is Lithium Hydroxide.
15. An article of manufacture according to claim 1, wherein said hydroxide is Sodium Hydroxide.
16. An article of manufacture according to claim 1, wherein said hydroxide is 15 Potassium Hydroxide.
17. An article of manufacture according to claim 1, wherein said hydroxide is Magnesium Hydroxide.
18. An article of manufacture according to claim 1, wherein said hydroxide is Calcium Hydroxide.
- 20 19. An article of manufacture according to claim 1, wherein said hydroxide is Beryllium Hydroxide.
20. An article of manufacture according to claim 1, wherein said hydroxide is Aluminum Hydroxide.
21. An article of manufacture according to claim 1, wherein said hydroxide is 25 Ammonium Hydroxide.
22. An article of manufacture for heat absorption, comprising:  
hydroxide in an amount sufficient to effect a level of heat absorption, said hydroxide being formed into an endothermic structure that is effective to absorb

said level of heat at least in part based on an irreversible decomposition of said hydroxide.

23. An article of manufacture according to claim 22, wherein said hydroxide is selected from the group consisting of Lithium Hydroxide, Sodium Hydroxide, 5 Potassium Hydroxide, Magnesium Hydroxide, Calcium Hydroxide, Beryllium Hydroxide, Aluminum Hydroxide, Ammonium Hydroxide and mixtures thereof.

24. In combination:

(a) a heat absorbing control device that includes hydroxide in an amount to effect a level of heat absorption; and

10 (b) a heat sensitive device in thermal communication with said heat absorbing control device;

wherein said hydroxide is supported in relation to said heat sensitive device, and wherein said hydroxide effects said level of heat absorption at least in part based on an irreversible decomposition of said hydroxide.

15 25. A combination according to claim 24, wherein said heat sensitive device is selected from the group consisting of a flight recorder, a metal structure, a plastic structure, an electronic device, an oven sensor, a missile skin, an exhaust pipe, a race car component, a fire wall, a nuclear reactor component, a gun, a munitions box, a battery and body protective structure.

20 26. A combination according to claim 24, wherein said heat absorbing control device includes a support means for supporting said hydroxide in relation to said heat sensitive device.

27. A combination according to claim 24, wherein said hydroxide is selected from the group consisting of Lithium Hydroxide, Sodium Hydroxide, Potassium 25 Hydroxide, Magnesium Hydroxide, Calcium Hydroxide, Beryllium Hydroxide, Aluminum Hydroxide, Ammonium Hydroxide and mixtures thereof.